

**IN THE UNITED STATES PATENT & TRADEMARK OFFICE**

IN RE APPLICATION OF: :  
ARAI ET AL. : EXAMINER: J. K. MICHENER  
SERIAL NO.: 10/060,458 :  
FILED: JANUARY 30, 2002 : GROUP ART UNIT: 1762

**FOR: THERMOSENSITIVE STENCIL PAPER AND METHOD OF  
PRODUCING THE SAME**

**DECLARATION UNDER 37 CFR 1.132**

**ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231**

**SIR:**

**Now comes Masanori Rimoto who deposes and states:**

**1. That I am a graduate of Niigata Prefectural Naoetsu Technical  
High School, Chemistry Course, in the year of 1968.**

**2. That I have been employed by Ricoh Company Limited for 36  
years as a researcher of diazo copy-materials (1970-1990), of  
thermosensitive stencil printing (1990-1999), and of toner for  
electrophotography (1999 to the present).**

**3. That I am an inventor in the above-identified application.**

**4. That I have read and understood US5,843,560 Ohta et al.,  
which has been cited against the claims in the above-identified  
application.**

**5. That the w/o emulsion formed of the compounds selected  
within the disclosure of Ohta et al. does not form a porous resin layer  
after drying. The reasons are set out in pages 2-3 that follow.**

**6. That the following additional experiment was conducted  
under my supervision during the period of from 1996-1997.**

**Experiment:**

The following experiments were carried out to examine whether a w/o emulsion formed of silicon oil, THF, water and a surfactants would form a porous resin layer after drying.

**(Experiment 1)**

The following ingredients were mixed to obtain a w/o emulsion:

Silicone oil	4 parts by weight
THF	30 parts by weight
Water	10 parts by weight
Surfactant	0.2 parts by weight

The obtained w/o emulsion was uniformly coated on a biaxial oriented polyester film having a thickness of 3.5  $\mu\text{m}$  by using a wire bar in an atmosphere of 30 °C and RH 90%, so as to obtain the coating mount of 7.0 g/cm<sup>2</sup> after drying. This coating was left to stand for 1 minute, and thereafter dried at 50 °C for 2 minutes in a drying box. However, the coating was remained as a liquid and the coating layer was not formed.

**(Experiment 2)**

A w/o emulsion was obtained from the following ingredients:

Silicone oil	4 parts by weight
THF	30 parts by weight
Water	10 parts by weight
Polyvinyl butyral (Softening point: 87°C)	4 parts by weight
Surfactant	0.2 parts by weight

At first, polyvinyl butyral was dissolved in THF, and this solution was mixed with the water. Thereafter, this mixture was added and mixed with the surfactant, added with the silicone oil, and subjected to stirring, thereby obtaining a w/o emulsion.

The obtained w/o emulsion was uniformly coated on a biaxial

oriented polyester film having a thickness of 3.5  $\mu\text{m}$  by using a wire bar in an atmosphere of 30 °C and RH 90%, so as to obtain the coating mount of 7.0 g/cm<sup>2</sup> after drying. This coating was left to stand for 1 minute, and thereafter dried at 50 °C for 2 minutes in a drying box. However, the formed coating layer was not porous.

**Result:**

A porous resin layer was not formed by the coating liquids comprising the w/o emulsions in Experiments 1 and 2, respectively.

**Conclusion:**

A w/o emulsion formed of silicon oil, THF, water and a surfactant does not form a porous resin layer of the present invention.

7. The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

8. Further deponent saith not.

Masanori Rimoto  
Masanori Rimoto

Oct. 4. 2004  
Date